

What is claimed is:

1. An atomizer nozzle (1) for fuels, particularly for charging a chemical reformer for obtaining hydrogen, comprising a nozzle body (2), having spray-discharge orifices (3) discharging into a metering space, and at least one metering aperture (6), wherein the spray-discharge orifices (3) are situated, with a radial directional component with respect to a center axis (10) of the nozzle body (2), at elevation steps (4), each elevation step having at least one spray-discharge orifice (3); and at least one nozzle body insert (5), having at least one flow-through opening (11), is situated in the nozzle body (2) in front of the first elevation level (4.1) in the direction of fuel flow (8) and/or between the elevation levels (4).

2. The atomizer nozzle as recited in Claim 1, wherein the nozzle body (2) is in the shape of a hollow cylinder.

3. The atomizer nozzle as recited in Claim 1 or 2, wherein a gas supply port (7) is situated in the nozzle body (2) between the first elevation level (4.1) in the direction of fuel flow (8) and the metering aperture (6).

4. The atomizer nozzle as recited in one of Claims 1 through 3, wherein downstream of the last elevation level (4.2) in the direction of fuel flow (8), at least one additional spray-discharge orifice (3) is situated with an axial directional component with respect to the center axis (10) of the nozzle body (2).

5. The atomizer nozzle as recited in one of the preceding claims, wherein the at least one nozzle body insert (5) is pressed and/or welded, particularly laser-welded, to the nozzle body (2) in a hydraulically leak-proof manner.

6. The atomizer nozzle as recited in one of the preceding claims, wherein the center axis (12) of the flow-through opening (11) of the nozzle body insert (5) runs parallel to the center axis (10) of the nozzle body (2).

7. The atomizer nozzle as recited in one of the preceding claims, wherein at least one of the nozzle body inserts (5) has a rectangular cross-section.

8. The atomizer nozzle as recited in one of the preceding claims,

wherein at least one of the nozzle body inserts (5) is concavely retracted from the flow-through opening (11) toward the nozzle body (2) against the direction of fuel flow (8).

9. The atomizer nozzle as recited in one of the preceding claims, wherein at least one of the nozzle body inserts (5) is concavely retracted from the flow-through opening (11) toward the nozzle body (2) in the direction of fuel flow (8).

10. The atomizer nozzle as recited in one of the preceding claims, wherein the cross-section of the flow-through opening (11) is rectangular or trapezoidal

11. The atomizer nozzle as recited in one of Claims 1 through 9, wherein the flow-through opening (11) has at least two uniform cross-sections of different size, particularly a stepped bore hole.

12. The atomizer nozzle as recited in one of the preceding claims, wherein the nozzle body (2) has at least one section (13) of reduced wall thickness in its axial profile.

13. The atomizer nozzle as recited in Claim 12, wherein the section (13) of reduced wall thickness runs in the area of an elevation step (4).